5/013/002
AMENDMENT?

FS-2800-5 (7/95)
OMB NO. 0596-0022
Expires 01/31/2002

USDA, Forest Service

PLAN OF OPERATIONS FOR MINING ACTIVITIES ON NATIONAL FOREST SYSTEM LANDS

Submitted by: _____ President 9/1/99
Signature Title Date

Plan Received by: _____ _____ _____
Signature Title Date

I. GENERAL INFORMATION

A. Name of Mine/Project: Sunshine Quartz/Hematite Claims Project

B. Type of Operation: Exploration and development
(lode, placer, mill, exploration, development, production, other)

C. Is this a (new/continuing) operation? (circle one). If continuing a previous operation, this plan (replaces/modifies/supplements) a previous plan of operations. (circle one)

D. Proposed start-up date of operation: July 1, 2000 (depending upon weather)

E. Expected total duration of this operation: 4 months

F. If seasonal, expected date of annual reclamation/stabilization close out: N/A

G. Expected date for completion of all required reclamation: October 31, 2000

II. PRINCIPALS

A. Name, address and phone number of operator: Uintah Mountain Copper Company
341 South Main Street, Suite 401
Salt Lake City, Utah 84111 801-530-1045

B. Name, address, and phone number of authorized field representative (if other than the operator). Attach authorization to act on behalf of operator.
Same as above

C. Name, address and phone number of owners of the claims (if different than the operator):
Same as above

(If more space is needed to fill out a block of information, use additional sheets and attach to form)

D. **Equipment and Vehicles.** Describe that which is proposed for use in your operation (Examples: drill, dozer, wash plant, mill, etc.). Include: sizes, capacity, frequency of use, etc.

Equipment for road maintenance and test pit activities is described in Section B of the Supplemental Discussion

E. **Structures.** Include information about fixed or portable structures or facilities planned for the operation. Show locations on the map. Include such things as living quarters, storage sheds, mill buildings, thickener tanks, fuel storage, powder magazines, pipelines, water diversions, trailers, sanitation facilities including sewage disposal, etc. Include engineering design and geotechnical information for project facilities, justification and calculations for sizing of tanks, pipelines and water diversions, etc.

No permanent structures are planned. Any temporary facility will be located at the permitted camp site area. One or two portable trailers (maximum 25 feet) may be used to house personnel and for use as a field office (camp has existing power and telephone connections). Potable water will be brought to the site in 10-gallon containers. Sanitation facilities will be self-contained portable units, primarily within trailers. Equipment fueling at the site and along the access road will be done via 3/4 ton service truck. Ore transfer at camp site will be done by use of temporary bins and conveyors. Power for transfer equipment will be either through use of the existing distribution lines at the camp or by gas-operated engines. Sample ore will be removed from the forest so that no milling facilities or support facilities for milling are needed.

V. ENVIRONMENTAL PROTECTION MEASURES (SEE 36 CFR 228.8

A. **Air Quality.** Describe measures proposed to minimize impacts on air quality such as obtaining a burning permit for slash disposal or dust abatement on roads.

No burning of vegetation will be permitted on the claims or the camp site. Depending upon precipitation, ambient road dust will be controlled by water truck spray application. Diluted application of Forest Service approved, non-toxic dust palliatives (such as Soil Seal, Soil Sement, etc.) may be used if conditions warrant. No other impacts to air quality are anticipated.

(If more space is needed to fill out a block of information, use additional sheets and attach to form.)

B. **Water Quality.** State how applicable state and federal water quality standards will be met. Describe measures or management practices to be used to minimize water quality impacts and meet applicable standards.

1. State whether water is to be used in the operation, and describe the quantity, source, methods and design of diversions; storage, use, disposal, and treatment facilities. Inlcude assumptions for sizing water conveyance or storage facilities

2. Describe methods to control erosion and surface water runoff from all disturbed areas, including waste and tailings dumps.

3. Describe proposed surface water and groundwater quality monitoring, if required, to demonstrate compliance with federal or state water quality standards.

4. Describe the measures to be used to minimize potential water quality impacts during seasonal closures, or for a temporary cessation of operations.

5. If land application is proposed for waste water disposal, the location and operation of the land application system must be described. Also describe how vegetation, soil, and surface and groundwater quality will be protected if land application is used.

No water is needed for test pit sample removal. Water for dust control will be obtained from off-site potable sources or nearby Moon Lake facilities. No waste water will be generated. Surface runoff water erosion protection is described in Section H of the Supplemental Discussion.

C. **Solid Wastes.** Describe the quantity and the physical and chemical characteristics of solid waste produced by the operation. Describe how the wastes will be disposed of including location and design of facilities, or treated so as to minimize adverse impacts.

No solid waste will be generated. All natural limestone rock and topsoil overburden will be utilized during reclamation work to provide stable slopes and as fill. No tailing will result from test pit work.

D. **Scenic Values.** Describe protection of scenic values such as screening, slash disposal, or timely reclamation.

Test pits and access road are not visible from the existing public roadways or Moon Lake recreational facilities. Work is being performed on an existing natural slide zone to mitigate visual impacts, with the site visible only from a small section of a hiking trail. Terraced reclamation with natural rock gabions will be performed immediately upon completion of test pit excavation and is part of the planned work for this season. See Section C of the Supplemental Discussion for aesthetic value of this type of reclamation.

(If more space is needed to fill out a block of information, use additional sheets and attach to form.)

E. **Fish and Wildlife.** Describe measures to maintain and protect fisheries and wildlife, and their habitat (includes threatened, endangered, and sensitive species) affected by the operations.

No impact to fish or wild life is anticipated from the development work. Road maintenance, terracing and re-vegetation work have historically reduced sedimentation (sedimentation analyses are provided in Section H of the Supplemental Discussion). Analysis indicates that planned reclamation work will aid in reduced sedimentation to the adjacent natural barren talus slope. Use of hay bales, road edge berms and bar ditches will control rain-induced sedimentl during test pit excavation and sample removal portions of the work. FS analysis done in 1994 indicated that this project was unlikely to effect any TES species. FS is to provide further TES evaluations in the planned EA for this development phase.

F. **Cultural Resources.** Describe measures for protecting known historic and archeological values, or new sites in the project area.

Archaeological surveys performed for 1978 for access road corridor construction cleared the area of cultural resources. FS is to provide an expanded area cultural resource evaluation in the planned EA for this development phase. UMCC desires to keep open access to natural pigment minerals for regional Native Americans who have historically utilized these materials for cultural ceremonies and will work with the FS and these groups to formalize an agreement.

G. **Hazardous Substances.**

1. Identify the type and volume of all hazardous materials and toxic substances which will be used or generated in the operations including cyanide, solvents, petroleum products, mill, process and laboratory reagents.

No milling or refining will be done in the forest. Excavation and sample removal does not require use of any hazardous substances. No hazardous substances are anticipated or planned for use.

2. For each material or substance, describe the methods, volume, and frequency of transport (include type of containers and vehicles), procedures for use of materials or substances, methods, volume, and containers for disposal of materials and substances, security (fencing), identification (signing/labeling), or other special operations requirements necessary to conduct the proposed operations.

Not applicable.

(If more space is needed to fill out a block of information, use additional sheets and attach to form.)

3. Describe the measures to be taken for release of a reportable quantity of a hazardous material or the release of a toxic substance. This includes plans for spill prevention, containment, notification, and cleanup.

No hazardous material use is anticipated. Construction equipment will be checked daily for fuel or oil leaks. If a leak is discovered from a vehicle, the volume lost and the cleanup measures will be documented and the FS will be contacted immediately. Any fuel-contaminated soil will be excavated and removed to an appropriate disposal facility.

H. **Reclamation.** Describe the annual and final reclamation standards based on the anticipated schedule for construction, operations, and project closure. Include such items as the removal of structures and facilities including bridges and culverts, a revegetation plan, permanent containment of mine tailings, waste, or sludges which pose a threat of a release into the environment, closing ponds and eliminating standing water, a final surface shaping plan, and post operations monitoring and maintenance plans.

Installation and evaluation of reclamation methods is a significant element of the proposed test pit activities. This work is detailed in Sections B through D of the Supplemental Discussion. The majority of the access road is and will remain part of the FS system and cannot be reclaimed. UMCC has an established plan on file with the FS for reclamation of the remaining road segment and will post a bond to cover future costs for this reclamation work.

VI. FOREST SERVICE EVALUATION OF PLAN OF OPERATIONS

A. Required changes/modifications/special mitigation for plan of operations:

(If more space is needed to fill out a block of information, use additional sheets and attach to form.)

B. **Bond.** Reclamation of all disturbances connected with this plan of operations is covered by Reclamation Performance Bond No. _____, dated _____, signed by _____ (Principal) and _____ (Surety), for the penal sum of _____. This Reclamation Performance Bond is a guarantee of faithful performance with the terms and conditions listed below, and with the reclamation requirements agreed upon in the plan of operations. This Reclamation Performance Bond also extends to and includes any unauthorized activities conducted in connection with this operation.

The bond amount for this Reclamation Performance Bond was based on a bond calculation worksheet. The bond amount may be adjusted during the term of this proposed plan of operations in response to changes in the operations or to changes in the economy. Both the Reclamation Performance Bond and the bond calculation worksheet are attached to and made part of this plan of operations.

Acceptable bond securities (subject to change) include:
1. Negotiable Treasury bills and notes which are unconditionally guaranteed as to both principle and interest in an amount equal at their par value to the penal sum of the bond; or
2. Certified or cashier's check, bank draft, Post Office money order, cash, assigned certificate of deposit, assigned savings account, blanket bond, or an irrevocable letter of credit equal to the penal sum of the bond.

VII. TERMS AND CONDITIONS

A. If a bond is required, it must be furnished before approval of the plan of operations.

B. Information provided with this plan marked confidential will be treated in accordance with the agency's laws, rules, and regulations.

C. Approval of this plan does not constitute certification of ownership to any person named herein and/or recognition of the validity of any mining claim named herein.

D. Approval of this plan does not relieve me of my responsibility to comply with other applicable state or federal laws, rules, or regulations.

E. If previously undiscovered cultural resources (historic or prehistoric objects, artifacts, or sites) are exposed as a result of operations, those operations will not proceed until notification is received from the Authorized Officer that provisions for mitigating unforseen impacts as required by 36 CFR 228.4(e) and 36 CFR 800 have been complied with.

F. This plan of operations has been approved for a period of _____ or until _____. A new or revised plan must be submitted in accordance with 36 CFR part 228, subpart A, if operations are to be continued after that time period.

VIII. OPERATING PLAN ACCEPTANCE

I/We have reviewed and agreed to comply with all conditions in this plan of operations including the required changes, modifications, special mitigation, and reclamation requirements. I/We understand that the bond will not be released until the Authorized Officer in charge gives written approval of the reclamation plan.

Operator (or Authorized Representative)	(Date)

IX. OPERATING PLAN APPROVAL

(Name)	(Title)
(Authorized Officer)	(Date)

Supplemental Discussion to 1999 Plan of Operations

A. Project Description – Phase 3 Test Pit

Proposed development work is the final phase of a three-phase test pit program designed to simulate ore removal and reclamation activities in a controlled location and manner while verifying the deposit geologic structure model developed from the 1994-95 drilling programs. A small test pit planned as the last phase in this development program should extract about 650 cubic yards of raw sample ore and reclaim a 250 square yard sample area over a 60-day work period. No waste rock results from the operations and all sample will be hauled from forest lands for further processing (no on-site milling or tailings). Small-scale test pits provide a wealth of economic and environmental reclamation data for evaluating the future mining potential of the project. All previous development phases were reviewed and approved by the US Forest Service prior to initiation.

Work will be performed soon after July 1, 2000, once snowmelt and runoff are complete and no traffic damage will occur to the 6.5 mile site access road. The following schedule has been developed based upon Phase 1 and 2 site work:

Activity	Time Length	Labor
Road preparation and mobilization	6 days	3 men
Overburden removal and stockpile	20 days	3 men
Ore sampling and hauling	16 days	6 men
Reclamation activities	18 days	10 men

The attached quad and site maps show the location of the development activities. Detailed work descriptions are also provided in the documents referenced in Section I.

B. Material Excavation, Removal and Backfill

Figures A through D demonstrate the sequencing of excavation and backfill of the proposed sample pit. An estimated 650 cubic yards of sample ore will be removed from the area. All of the remaining 2000 cubic yards of native limestone rock and topsoil overburden will be incorporated into the reclaimed and stabilized slope with no tailings or waste rock for disposal. The shape and dimensions of the test pit have been revised to accommodate Forest Service geotechnical engineer recommendations of 11/30/98.

Topsoil and fractured limestone rock overburden (noted as "TBS" or "thinly bedded series") will be excavated and placed as backfill with track-mounted equipment. Based upon previous site work and drill log data, no blasting is anticipated or planned. A combination of one Caterpillar D7 or D8-size bulldozer and one or two Caterpillar 312 or 315 excavators will remove overburden materials. This overburden will be placed in uniform lifts along the adjacent access road to a 5 to 10 foot depth by use of the bulldozer and a 1.5 to 2.5 cubic yard track-mounted front end loader. All of the proposed equipment have been previously used at the site with good results. Because of the confined area in which the equipment will function, the estimated time to accomplish all overburden removal has been doubled from known on-site performances to allow for safe operation. Based on previous time studies at this site, overburden can be safely removed and stockpiled at the rate of 5 to 10 cubic yards per hour per piece of equipment.

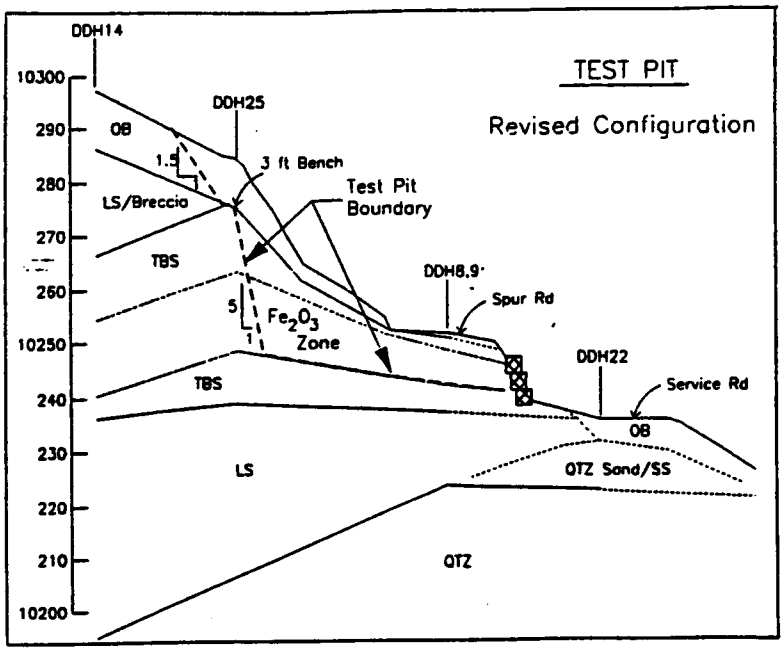
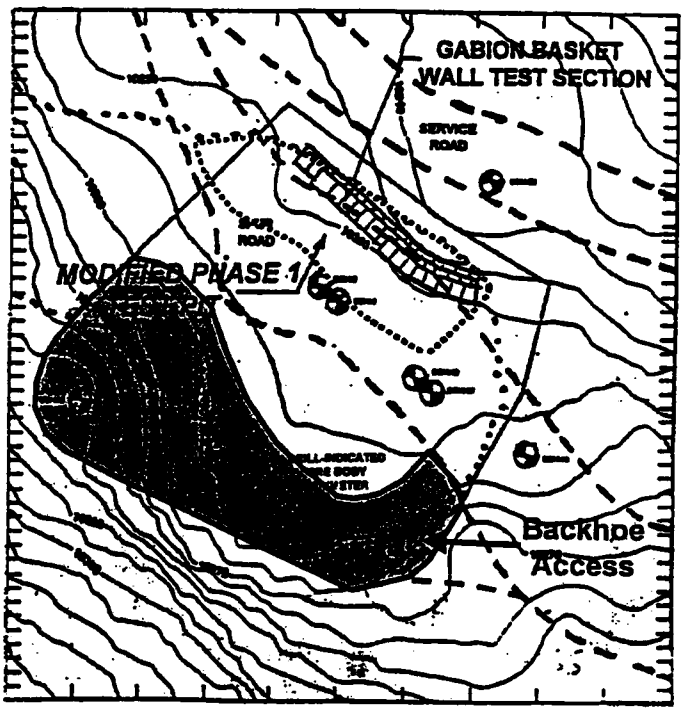
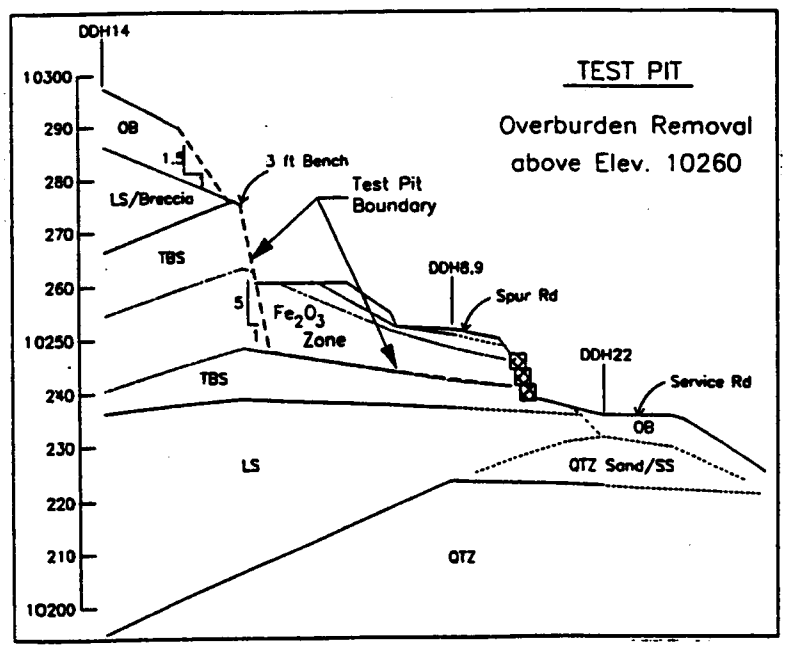


Figure A

Revised Test Pit Configuration
Staged Excavation
Overburden Removal





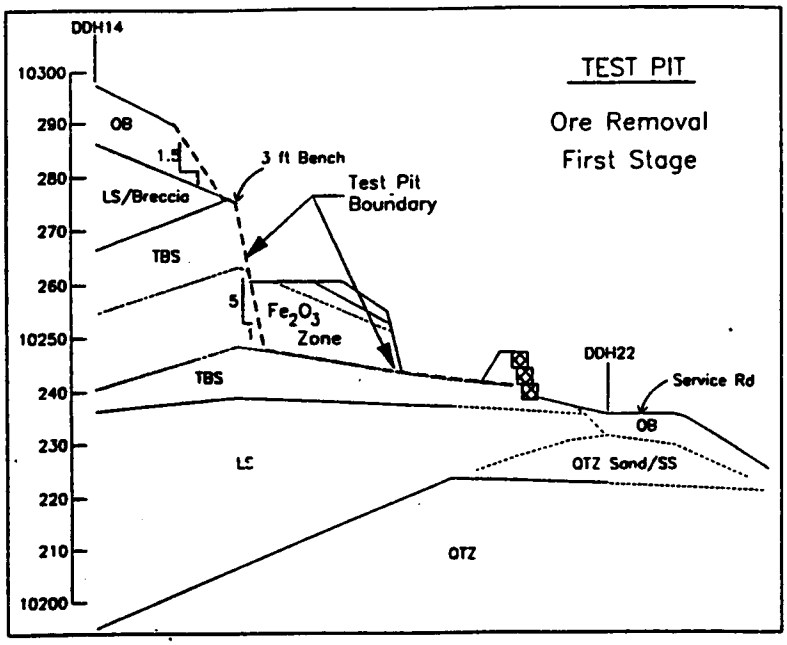
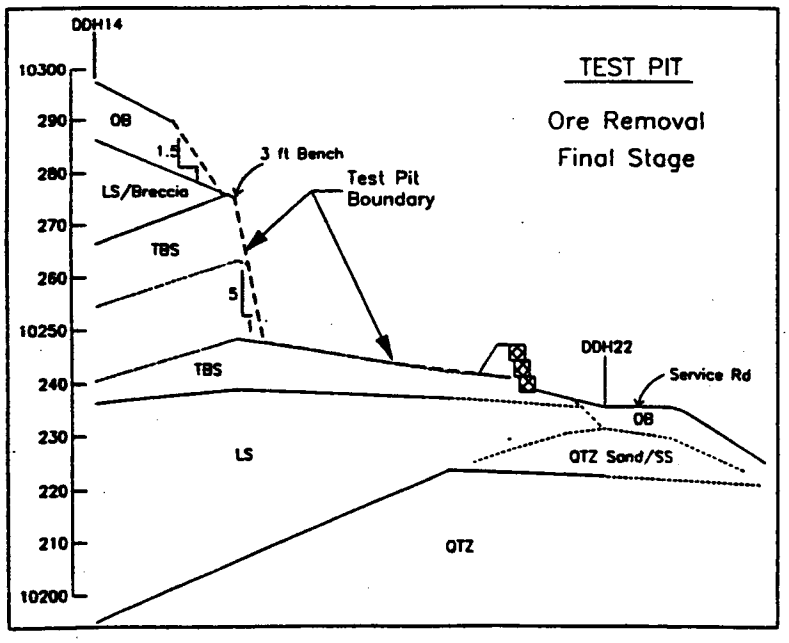


Figure B

Revised Test Pit Configuration
Staged Excavation
Ore Removal



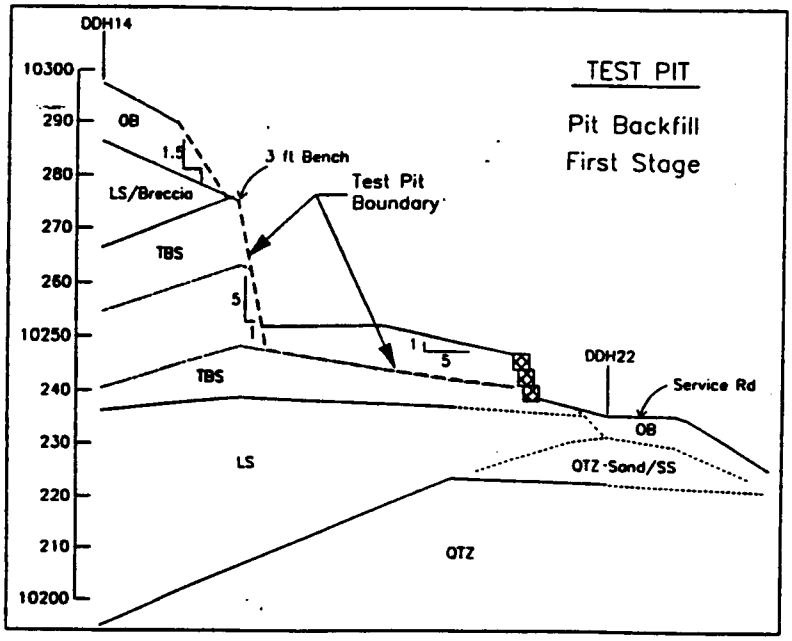
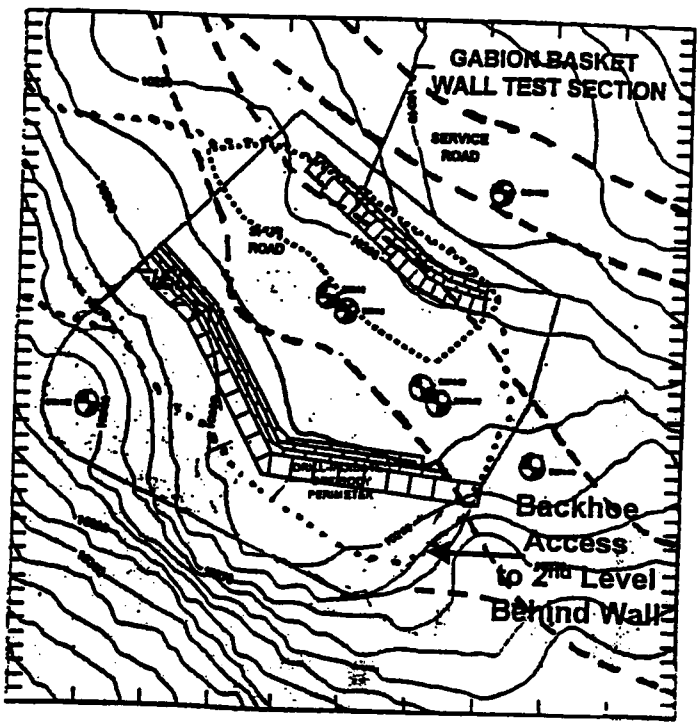
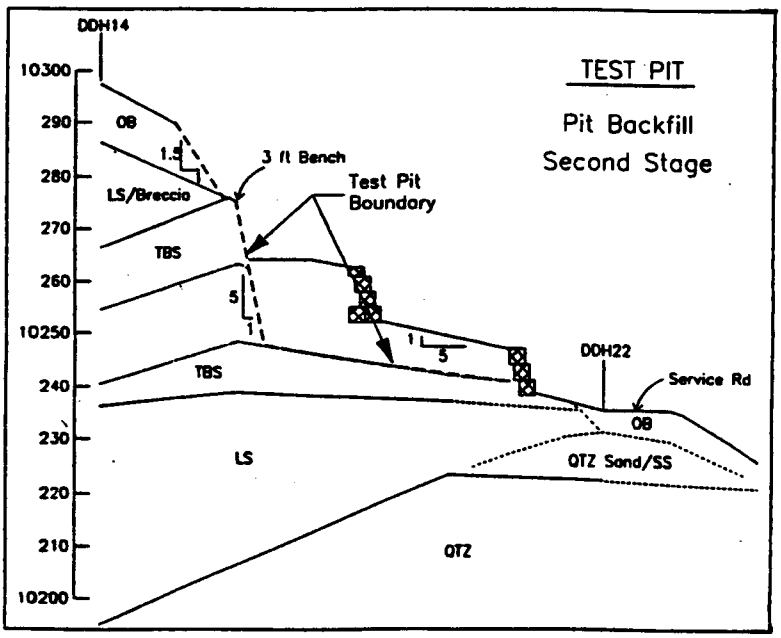
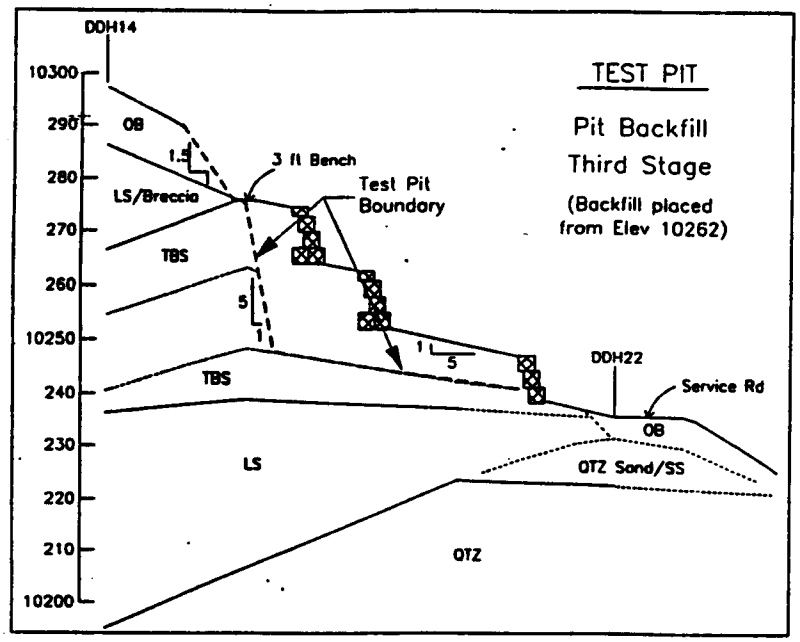


Figure C

Revised Test Pit Configuration
Staged Backfill Work
Lower Gabions







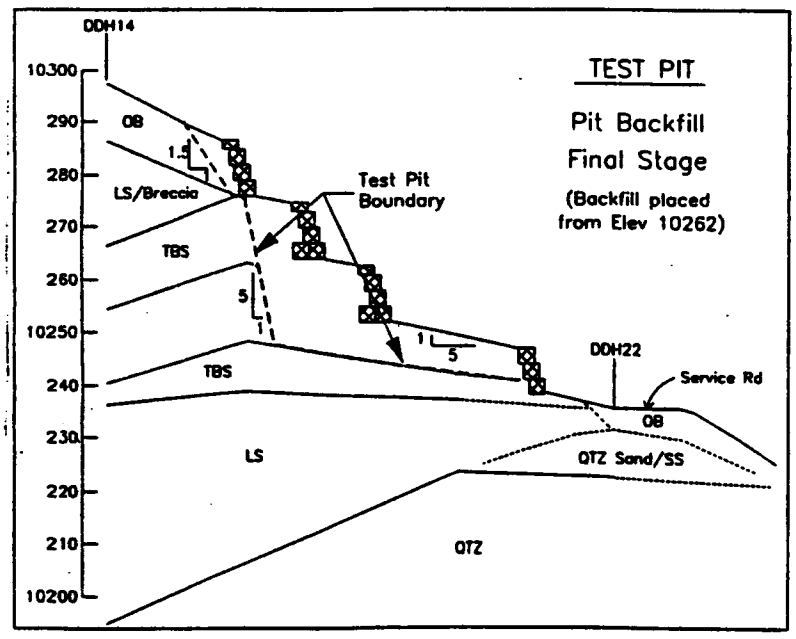
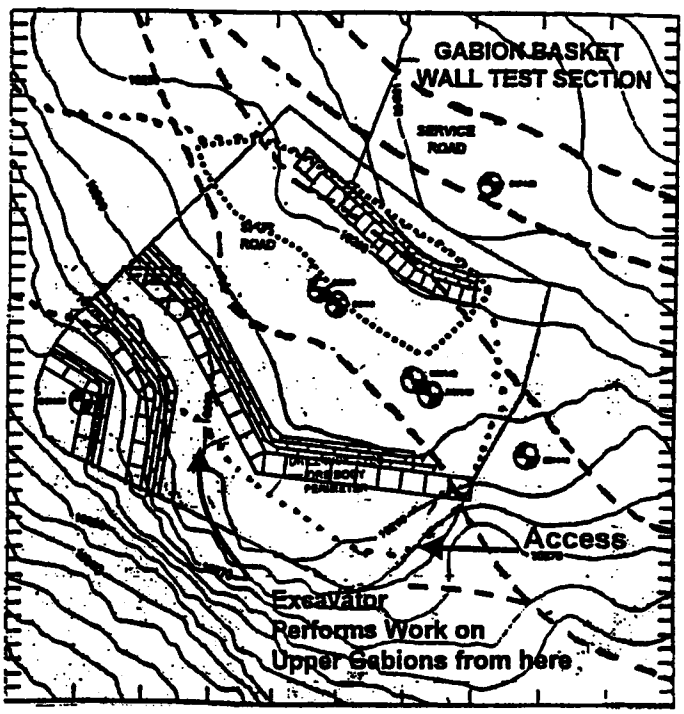


Figure D

Revised Test Pit Configuration
Staged Backfill Work
Upper Gabions



The existing upper spur road will be cleared of sloughed material to allow access to the top of the slope (Figure A). The bulldozer will cut into the hillside at about Elev. 10260 to allow the excavator access to the top of the slope (maximum planned reach of 20-30 feet to the top of the cut at about Elev. 10290). Once the overburden at this elevation has been removed, work will begin near the intersection of the spur and access roads (Elev. 10245 to 10250) to remove any remaining overburden (Figure B). Underlying ore will then be removed by combined use of the bulldozer, loader and excavator (not all at the same time).

The pit will be backfilled by following the process in reverse and using the adjacent spur road for access to the upper reaches of the cut (Figure C). Overburden will be placed behind the existing gabion to the base elevation of the next higher gabion system (Elev. 10252). Upon completion of the second wall system, overburden backfill will be placed from the spur road at Elev. 10262. The final upper gabion walls are significantly smaller and will require the excavator to locate at Elev. 10262, lifting backfill and basket rock to higher levels (Figure D). Once all upper level work is complete, the existing lower gabion wall will be extended to the northwest, with final backfill placed from the access road by use of the excavator.

Native overburden topsoil will be replaced on the reclaimed terraces. Any additional topsoil needed to establish vegetation and prevent short-term erosion will be borrowed from local sites as recommended by the USFS at the time of work.

Work will proceed around any anomalous zones of non-rippable rock encountered during excavation. Since this work is part of a development program (not production mining) complete excavation is not required. Historically, blasting at the site has only been needed when excavating into quartzite deposits that underlie the ore body. All planned work will be done above this harder strata.

Additional miscellaneous equipment includes fuel and maintenance trucks to service vehicles at the test pit site and the camp site. A water truck will be used as needed to control dust.

C. Reclamation

Site reclamation incorporates the use of terraced embankment with levels restrained from movement using gabion rock walls. Steep side slopes (30° to 40° from horizontal) preclude laying back of the hillside to a stable natural slope without a support system. UMCC has historical success at terrace stabilization of this area. The original switchback road across the toe of the slide zone was terraced and reclaimed by UMCC in 1980. Since that time, vigorous vegetation growth has been observed, significantly reducing sedimentation from the natural slide area. Review of projects worldwide show that similar steep slopes in slide zones have been successfully stabilized by terracing with gabion structures (Maccaferi, 1995).

Gabion rock walls (rock-filled wire baskets) create retaining structures that have a natural appearance, adapt to difficult sites, require little to no maintenance and can easily be vegetated. Reclamation of the Phase 3 pit area requires the placement of a series of four gabion retaining structures ranging from 20 to 80 feet in length, placed up to 10 feet above adjacent terrace grades at step-back slopes of 70 degrees. Rock backfill incorporates native fractured limestone and fine soils near the top of baskets to encourage vegetation growth on and above the retaining structures.
The first 9 foot high gabion rock test wall was placed in 1997 for reclamation of Phase 1 and modified Phase 2 work. The condition of this structure has been observed and documented

each season to evaluate the effectiveness of this type of stabilization method at the site. The wall has functioned well, with only a slight outward rotation after initial placement and some washout of fines within individual baskets. Vegetation actively grows on the face of the wall and upon the supported terrace. The wall appearance (color and texture) blends in well with the surrounding native rock. Figures E and F show the wall at time of placement and after one year of service.

Gabion wall construction equipment and sequence is provide in Section B of this discussion. Gabion baskets require no concrete foundations and are primarily hand-placed with manual labor. Time studies performed during test wall construction indicate that the 450 cubic yards of gabion wall planned for Phase 3 reclamation can be erected at this site at the rate of at least 25 cubic yards per day. A small 1.5 cubic yard loader supports most of the fill operations, with the small D7 bulldozer and 312 excavator placing and compacting fill in and behind walls. Wall erection will be expedited by pre-screening and stockpiling of basket rock prior to the start of wall construction.

Use of gabions for local slope stability in this difficult terrain is also documented in a paper presented at the 37th US Symposium on Rock Mechanics in 1999, with the paper featuring this UMCC site.

Seeding will be performed on terraces upon completion of backfill operations, and will incorporate a Forest Service approved mix of equal parts of Nezpar Indian rice grass, Secar Blue Bunch wheat grass and Sheep fescue applied at the minimum rate of 3 pounds per 1000 square feet of area. Seedlings will also be planted upon request by the Forest Service.

Previous road seeding on an abandoned switchback access road performed by UMCC in the early 1980's provided temporary vegetation until the natural grasses and plants eventually became established. Empirical evidence on the existing 6.5 mile access road suggests that natural seeding is aggressive and the most effective and long-lasting form of disturbed area re-vegetation.

D. Excavation and Reclamation Slope Stability

Extensive geotechnical analyses and evaluations have been performed by UMCC and the Forest Service on excavation and gabion wall stability. These are documented in previous correspondence and the 6/3/99 UMCC engineering report to the Forest Service, with excerpts provided herein.

Drill logs at the test pit location show that the unconsolidated slope overburden ranges from 5 to 9 feet in thickness. Below this material is fractured rock that becomes significantly more competent with depth at 7 to 16 feet below the top of the cut. Rock below this depth is bedded into the hillside and does not daylight, allowing near vertical slopes (see previous correspondence on this issue from 1995). Minor rock raveling within the limestone strata are easily controlled by cutting the slope to the planned 5:1 slope (V:H). This is in agreement with most standard texts (Rodriguez, et al. note slopes cut in similar materials ranging from 4:1 to 8:1). Rock scaling with this configuration is not anticipated.

The minimum acceptable temporary slope stability for a two to three week time frame is 1.1 (approximately the minimum existing natural slope stability value with the assumed soil and rock properties). The analysis shows cut embankment stabilities through the entire rock mass with 5:1 slopes are at least 1.28 (saturated) and 1.31 (normal moisture). When evaluating only the

Figure E - Gabion Test Wall: September 1997

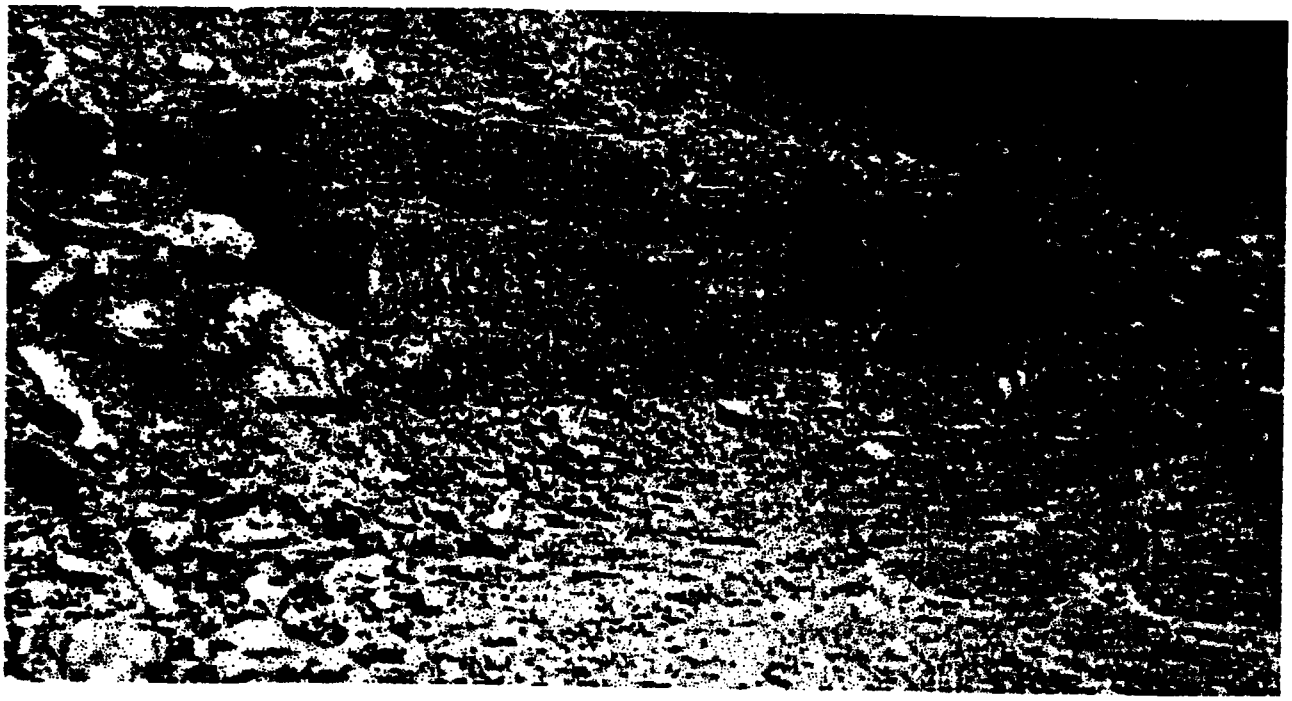


Figure F - Gabion Test Wall: August 1998

fracture rock zone, localized slope stabilities remains acceptable at 1.28 (saturated) and 1.33 (normal moisture).

Previous analysis and work at this site indicates that soil overburden at the top of the cut is stable at about a 1.5:1 to 1.2:1 slope (H:V) for temporary cuts. Figure G provides a summary of slope stability computer runs for the steepest and highest slope within the Phase 3 test pit (assumes the maximum/worst case unconsolidated fill and highly fractured rock depths found at this site, 9 and 7 feet, respectively).

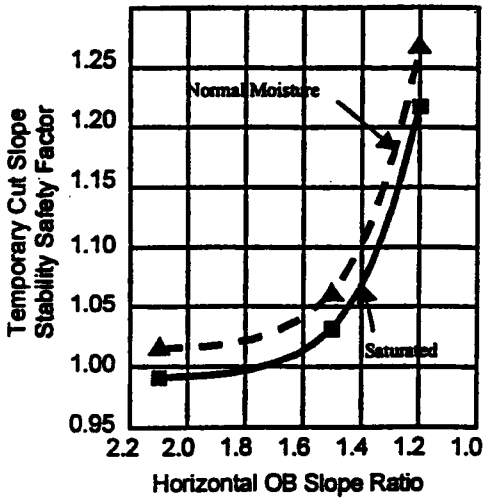


Figure G. Slope Stability Evaluation For Temporary Cut Slope of Phase 3 Test Pit Program

A slope stability of 1.10 to 1.20 for the unconsolidated upper soil overburden is adequate for short-term cuts (less than 3 weeks), especially in areas where only cab-enclosed heavy equipment will be allowed. Any loss of material will originate from the unconsolidated overburden at the top of the cut that may erode during rainstorms. The 3-foot bench cut at the top of the fracture rock zone will capture these loose material.

Slope stability analyses have also been performed for the gabions walls with heavy equipment live loading and the entire slope following completion of the proposed gabion walls.

The test wall was originally designed as a three-tiered, stair-stepped vertical gabion structure. During placement of backfill, the top of the wall rotated from 0 to 2 feet off vertical alignment to the present observed state. As a test of live load stability, heavy equipment was placed above the wall and within 1 foot of the gabions immediately after backfill. No additional movement was observed. One year after installation, a CAT 312B excavator performed additional sample removal work within 3 feet of the wall. No movement was observed from this equipment activity.

Further analyses have been performed to verify that the wall safety. The wall was modeled in a worst-case configuration, assuming all tiers rested in a vertical alignment. Table 1.0 gives a summary of the analyses, including the original design case, the as-built (model) configuration and this same configuration with design equipment loads. Although stability is lower than originally anticipated, the wall still functions safely, meeting minimum standard industry safety factors for long-term and transient loadings.

Table 1.0 – Safety Factor Analyses Summary of Gabion Wall

Analysis Case	Factors of Safety			
	Sliding	Overturning	Slope Stability	Bearing
Design (no loads)	7.37	6.51	2.57	14.5
As-Built	5.20	3.12	2.72	7.40
As-Built w/loads	3.11	2.36	2.19	5.61

This construction and analysis information indicates that future gabion walls should be inclined into the hillside 10° to 15° from vertical to compensate for construction-related outward rotation from backfilling.

The existing undisturbed slope has a stability safety factor of 2.33 for deep-seated failure and 1.11 for localized surface failure of saturated unconsolidated overburden. Upon completion of all gabion walls, the disturbed embankment overall and local safety factors are both on the order of 1.5. From this analysis, the gabion base design for the upper levels was modified to improve overall stability of the embankment from failure.

E. Material Handling and Transport

Access to the test pit is via the existing Forest Service access road. No new road construction is required. The access road meets minimum width requirements for all equipment and has been utilized by all proposed equipment in the past. 12-ton 10-wheel rear dump trucks will approach the site to within about 600 feet from the pit area for loading (where the road grade is 6% or less). Turn-around room will be constructed at this location, with an approximate 50 foot width provided.

Overburden will be placed as temporary fill on the access road directly below the pit area extending to the original adit. No vehicles will travel on this road segment during the work. The road segment can accommodate the expected 2000 cubic yards of fill (250 feet long, 10 to 15 feet wide, with fill 5 to 10 feet deep). The overburden rock will be pushed by the dozer or placed by loader on the access road, leveled and moderately compacted into place with the same equipment until needed for reclamation. There will be an attempt to segregate and stockpile topsoil from the overburden.

Sample ore will be transported from the test pit area a by conveyor for loading onto haul trucks. Self-contained portable conveyor systems are to be tested at this phase of development to evaluate their effectiveness. If successful, conveyors would inhibit the need to build additional roads on the claims for future operations and could be incorporated into future mining plans to reduce traffic and natural resource impacts. A simple bin and conveyor at the camp site will also be used in lieu of a loading dock to off-load 10-wheel trucks into larger 20 to 30 ton trucks for long-haul of ore. All components will be portable and removed from the forest upon completion of annual activities.

Use of 10-wheel dump trucks during previous test phases doubled ore haul rates and reduced trip traffic on the access road. It was found that, with no additional road improvement, larger trucks could safely be brought within about 1000 feet of the main ore operations area. With additional minor road improvements, these larger trucks can safely drive to the loading location.

10-wheel trucks travel slightly slower than 5-ton trucks (8.5 mph versus 6.5 mph), but do no additional road damage. Observation of road conditions after large truck travel showed the slower, heavier trucks compacted loose surfaces on the road and produced divots only where the road was saturated. This work and previous experience demonstrates that it is very important to maintain a well drained surface to prevent erosion and protect against damage. It was observed by those at the site who have been present during previous site development projects that frequent trips by smaller pickup trucks have resulted in more detrimental road impacts since soft, saturated road sections are affected by all types of vehicles to about the same degree.

In well-drained areas (more than 90% of the access road), vegetation growth along with cobble rock plating cover the access road. Observations of road surface conditions were made prior to the start of haul and reclamation work and after completion of all Phase 1 and 2 activities. Although grasses and tree seedlings in the wheel paths were pressed onto the ground surface, nearly all vegetation was actively growing and appeared to be rebounding to original condition almost immediately after traffic ceased. Vegetation growth has been very aggressive during the latter 1990's on the road surface and may require some trimming in the future to allow safer vehicle access (not planned for Phase 3 work). The road in may areas appears more like a forest field than an unimproved access road. Isolated poor drainage conditions appear on less than 10% of the road surface and are related to drainage features crossing the road path. There is less than 100 linear feet of rutting along the entire 6.5 mile access road.

From previous work phases, sample ore can be hauled at the rate of 2 cubic yard per hour per truck to the camp site 6.5 miles from the test pit. This rate includes return travel time to the loading area and loading time. For Phase 3 work, two 12-ton, 10-wheel rear dump haul trucks will be needed for the short haul to the camp site, with 4 trips per day. Two long-haul trailer trucks will be used each day to transport sample off the forest lands. The trailer trucks will utilize FS Route 1559 and State Route 87 in Duchesne County to Carbon County along Highway 191, with round trip travel of 4 hours.

During Phase 3, three to five miscellaneous support vehicles will also travel to and from the site each day. These are primarily small pick-up trucks and SUV's to transport equipment operators, truck drivers, laborers, construction superintendent and geologist. The fuel/service truck will travel the road once per day and the water truck will be used as needed, up to three times per day.

F. Man Camp Site Features

No permanent structures are planned. Any temporary facility will be located at the permitted camp site. One or two portable trailers (maximum 25 feet) may be used to house personnel and for use as a field office (camp has existing power and telephone connections). Potable water will be brought to the site in 10-gallon containers. Sanitation will be by self-contained portable facilities. Equipment fueling at the site and along the access road will be done via 3/4 ton service truck. Ore transfer at camp site will be done by use of temporary bins and conveyors (as noted in Section E). Power for transfer equipment will be either through use of the existing distribution electric lines at the camp or by gas-operated engines. Sample ore will be removed from the forest so that no milling facilities or support facilities for milling are needed.

G. Highway Impacts

Impacts on regional roads will be minimal during Phase 3 operations, with only minor impacts from long-haul trailer trucks. Two road features were identified as having the highest probability of impact from these operations: (a) 10-ton limit bridge approximately ¼-mile north of the south boundary of the Ashley National Forest on the Moon Lake Recreational Road, and (b) 3.5 miles of the same road, from the camp turnoff to Mountain Home, Utah.

The referenced bridge has a small span, on the order of 20 feet between abutments. The 10-ton limit is based upon full vehicle load bearing within the supports at the same time (all wheel sets on the bridge simultaneously). From evaluation of equipment data, a long-haul 20 to 30 ton trailer truck can place at most 60% of its load on the bridge at any instance. Loads on long-haul trailers will be limited to 17 tons for Phase 3 work to accommodate bridge limits.

It is anticipated that 50 to 60 long-haul trailer trips will occur during Phase 3 work over a 16-day period. Based upon AASHTO methods for calculating highway loads, 76 18-kip Equivalent Single Axle Load (EASL) is expected from these activities. The Utah DOT does was not able to provide any data on this specific road. Typical recreational roads are designed for 50,000 18-kip EASL's over a 20-year pavement life. With this assumption, Phase 3 traffic will reduce road life over this pavement section by about 1/10 of 1 percent.

H. Water Quality Issues

Drainage water from storm runoff on the access road has been controlled by use of mud bars, road edge bar ditches, surface vegetation and natural cobble plating. These have been effective in providing a non-erosive surface. Phase 3 activities should not impact the access road or increase sedimentation from this source. Minor road maintenance will be performed that includes removal of fallen trees from the road path (cut and place to the side of the road) and hand-removal of loose rocks from the surface from a road crew. Blading will only be done in any wash-outs. At this time, there has been only one reported washout on the 6.5 miles of road.

Test pits adjacent to the natural erosive talus slope and slide zone will be reclaimed and stabilized with terraced embankments and gabion rock walls that will slow storm water and snow melt runoff, inhibiting sedimentation.

Sediment delivery from the reclaimed Phase 3 test pit will be minimal. The inside (hillside) curve of the road captures most runoff and minor sediments that will develop during excavation and sampling operations. In the event that seasonal rains result in sediment loss during the active operations, UMCC will employ the use of temporary silt fences, hay bales and terracing to capture sediments within roadway flows.

Completed reclamation is estimated to reduce sediment loss when compared to the existing condition of the barren and erosive talus slope. Sediment calculations indicate that the re-vegetated terraces contained by the gabion wall system will reduce average annual sediment loss of the existing slopes from 9 to 10 percent over a 10-year period. Figure H shows the ratio of new to existing slope sediment loss over time.

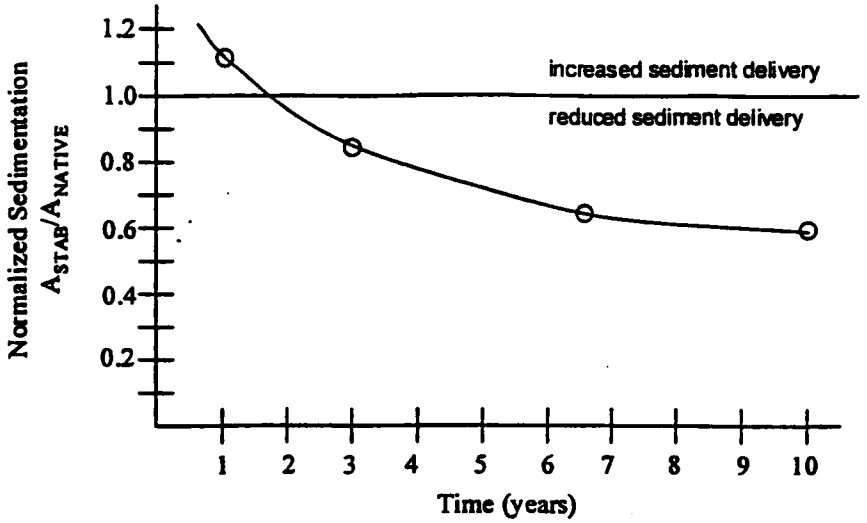


Figure H. Sediment Delivery from Phase 3 Test Pit Area after Reclamation

I. References

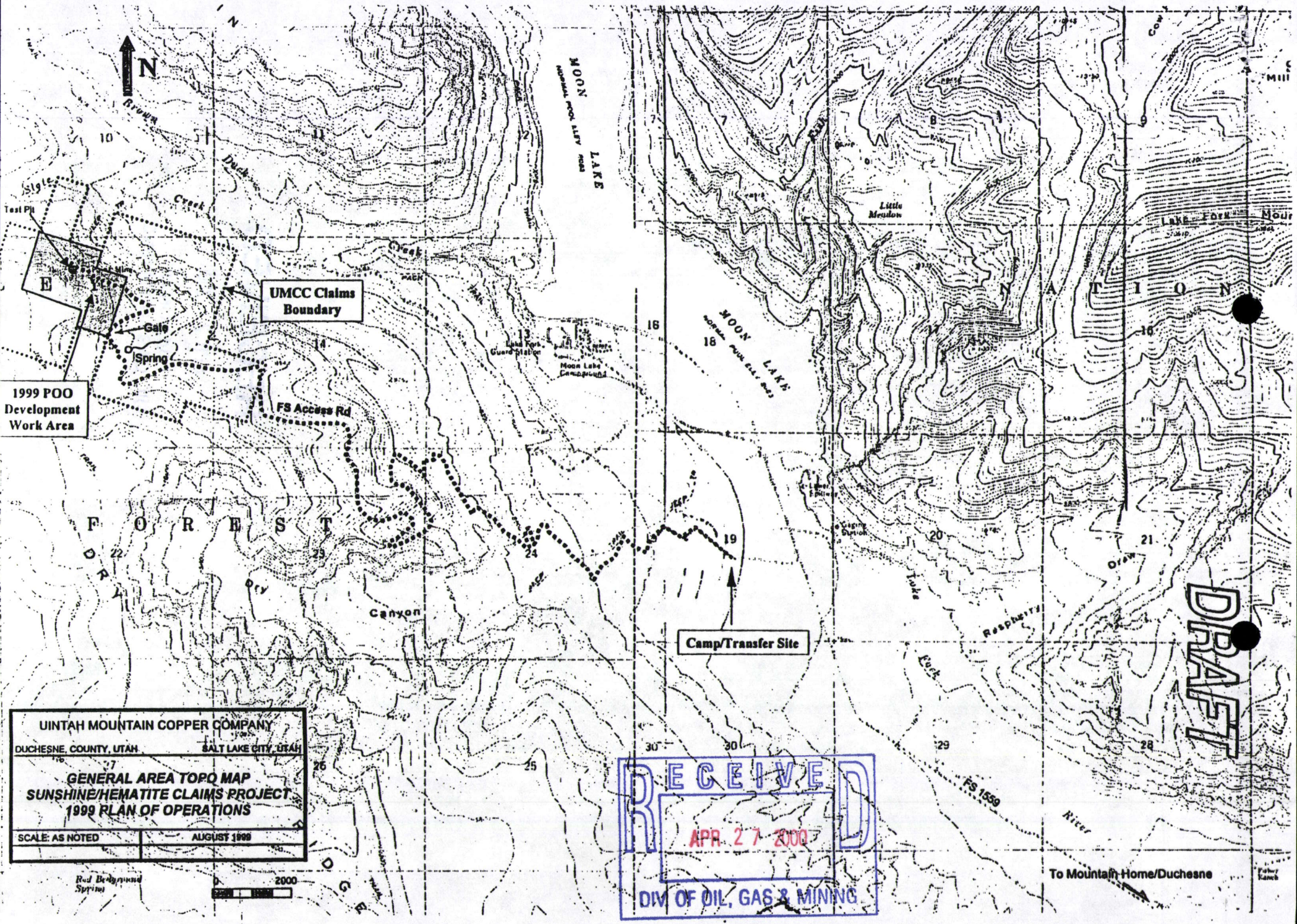
A. R. Rodriguez, H. del Castillo and G. F. Sowers, "Soil Mechanics in Highway Engineering, 1988.

P. M. Kandaris, "Use of Gabions for Localized Slope Stabilization in Difficult Terrain," Proceedings: 37th US Rock Mechanics Symposium, June 1999.

Maccaferri Gabions, Inc., "Retaining Structures," 1995

UMCC, "Slope Stability Analysis of Test Pit Phase III Work", response to comments by Richard Kennedy, June 3, 1999

UMCC, "Addendum #1 to 1996 Revisions to Plan of Operations", response to USFS comments, May 21, 1996



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